

very close, our definition of gross private national saving is similar to that of gross private saving in the U.S. national accounts. A reconciliation of the two concepts is presented in Table 3.

TABLE 2
RECONCILIATION OF PERSONAL DISPOSABLE INCOME AND GROSS PRIVATE
NATIONAL INCOME, 1958

1.	Personal disposable income (Table 2.1)*	318.8
2.	- Surplus of social insurance funds (Table 3.7)	0.0
3.	- Government transfer payments to persons other than benefits from social insurance funds (Table 3.9)	8.1
4.	+ Undistributed corporate profits and inventory valuation adjustment (Table 1.14)	10.5
5.	+ Capital consumption allowances (Table 1.9)	38.9
6.	+ Statistical discrepancy (Table 1.9)	1.6
7.	+ Expenditure (items 3, 4, 5 from Table 1 above)	41.4
8.	+ Wage accruals less disbursements (Table 1.9)	0.0
9.	- Net interest paid by consumers (Table 2.1)	5.9
10.	+ Personal nontax payments (Tables 3.1, 3.3)	2.3
11.	= Gross private national income	399.5

*All table references are to *The National Income and Product Accounts of the United States, 1929-65, Statistical Tables, A Supplement to the Survey of Current Business*, August 1966, henceforward NIP, 1966.

TABLE 3
RECONCILIATION OF GROSS PRIVATE SAVING AND GROSS PRIVATE
NATIONAL SAVING, 1958

1.	Gross private saving (Table 5.1)*	71.7
2.	+ Personal consumption expenditures, durable goods (Table 1.1)	37.9
3.	+ Surplus, social insurance funds (Table 3.7)	0.0
4.	+ Statistical discrepancy (Table 1.9)	1.6
5.	= Gross private national saving	111.2

*All table references are to *The National Income and Product Accounts of the United States, 1929-65, Statistical Tables, A Supplement to the Survey of Current Business*, August 1966, henceforward NIP, 1966.

2.3. Labor and Property Compensation *(Current prices)*

We divide total gross private national income between labor and capital income. The allocation of gross private domestic factor outlay between labor and capital is described in detail in Christensen and Jorgenson.⁶ We have maintained that allocation except for our treatment of entrepreneurial income. We follow Christensen⁷ in imputing the average annual wage of all employees in the private domestic economy to all proprietors. Christensen has shown that this imputation is consistent with the view that entrepreneurs receive competitive returns to both their labor and capital services.

⁶Christensen and Jorgenson (1970), Section 2, pp. 20-24.

⁷Christensen (1971).

The component of income originating in general government, government enterprises, and the rest of world sectors consisting of compensation of employees is allocated to labor income. Income originating in the rest of world sector consists of compensation of employees,⁸ which we assign to labor income, and corporate profits and net interest, which we assign to property income. The investment income of social insurance funds less transfers to general government and net interest paid by government are included in property income. The corporate profits tax and business property taxes are also allocated to property income.

Finally, we allocate personal income taxes between labor and property income in accord with a method developed by Frane and Klein. They describe their method as follows: "The fraction of taxes in each income bracket allocated to wage income is estimated by the ratio of wage and salary income to "adjusted gross income" in each bracket. Total taxes allocated to wages are the sum of the taxes so allocated in all brackets."⁹ This method has been applied by Ando and Brown to U.S. data for 1929 to 1958.¹⁰ We have updated their figures to 1969 in a way that closely approximates this procedure.

TABLE 4
GROSS PRIVATE NATIONAL LABOR AND PROPERTY COMPENSATION, 1958
(CURRENT PRICES)

<i>Labor Compensation</i>	
1. Private domestic outlay for labor services (Table 6.1 plus our imputation for proprietors) ^a	252.8
2. + Income originating in general government (Table 1.13)	42.1
3. + Income originating in government enterprises (Table 1.13)	4.8
4. + Compensation of employees, rest of world (Table 1.13)	0.0
5. - Personal income taxes attributed to labor income (our imputation)	28.3
6. = Private national labor income	271.5
<i>Property Compensation</i>	
1. Gross private domestic outlay for capital services (our imputation)	166.9
2. + Corporate profits, rest of world (Table 1.13)	1.7
3. + Net interest, rest of world (Table 1.13)	0.3
4. + Investment income of social insurance funds less transfers to general government (Table 3.7)	1.2
5. + Net interest paid by government (Tables 3.1 and 3.3)	6.2
6. - Corporate profits tax liability (Table 6.14)	19.0
7. - Business property taxes ^b	17.4
8. - Personal income taxes attributed to property income (our imputation)	9.0
9. - Federal estate and gift taxes (Table 3.1)	1.4
10. - State and local death and gift taxes (Table 3.3)	0.4
11. - State and local government motor vehicle licenses, property taxes, and other taxes (Table 3.3)	1.2
12. = Gross private national property income	128.1

^aAll table references are to *The National Income and Product Accounts of the United States, 1929-65, Statistical Tables, A Supplement to the Survey of Current Business*, August 1966.

^bChristensen and Jorgenson (1970, Table 1, p. 23, line 6 in factor outlay).

^cNIP (1966), Table 1.13.

^dFrane and Klein (1953), p. 336.

^eAndo and Brown (1963).

Personal income taxes on income from labor services, as estimated by Ando and Brown, are a remarkably stable proportion of total personal income tax receipts. The 1929-1958 figures show an average proportion of 0.755 with a negligible amount of variation. *Statistics of Income*¹¹ indicates that the ratio of labor to property income was very stable in the 1951-1958 period and that

TABLE 5
GROSS PRIVATE NATIONAL RECEIPTS AND EXPENDITURES,
1929-1969 (CURRENT PRICES)

Year	Gross Private National Income	Labor Compensa- tion	Property Compensa- tion
1929	102.7	65.5	37.1
1930	90.1	60.8	29.3
1931	76.9	52.7	24.1
1932	56.2	42.3	13.9
1933	55.3	39.9	15.3
1934	63.8	45.4	18.4
1935	69.2	49.1	20.1
1936	79.0	55.2	23.8
1937	85.6	61.0	24.6
1938	80.6	57.6	23.1
1939	86.8	61.1	25.8
1940	94.1	65.3	28.8
1941	112.1	79.3	32.8
1942	136.7	100.7	35.9
1943	160.3	118.3	41.9
1944	178.5	130.1	48.4
1945	181.8	132.0	49.8
1946	185.2	130.7	54.5
1947	204.1	142.1	62.0
1948	230.0	156.9	73.1
1949	227.0	159.3	67.6
1950	254.0	174.1	79.9
1951	282.9	194.6	88.3
1952	299.4	206.9	92.4
1953	317.1	221.2	96.0
1954	324.3	223.6	100.7
1955	354.7	239.3	115.4
1956	370.5	256.7	113.8
1957	388.6	269.2	119.5
1958	399.5	271.5	128.1
1959	431.9	292.3	139.7
1960	448.5	305.8	142.7
1961	462.0	314.7	147.3
1962	496.2	333.9	162.3
1963	522.8	350.0	172.3
1964	567.2	379.2	188.0
1965	609.9	404.9	205.0
1966	669.4	442.2	227.2
1967	708.0	470.4	237.6
1968	756.0	511.0	245.0
1969	807.8	551.8	256.0

¹¹ *Statistics of Income: Individual Income Tax Returns*, U.S. Treasury Dept., various years.

TABLE 5—continued

Year	Gross Private National Receipts and Expenditures	Consumption Expenditures	Consumer Outlays	Gross Private National Savings
1929	103.5	77.0	78.1	25.4
1930	91.0	71.4	72.4	18.6
1931	78.8	63.5	64.4	14.3
1932	57.4	50.0	50.8	6.7
1933	56.5	49.3	50.0	6.5
1934	65.1	53.9	54.6	10.5
1935	70.7	56.4	57.1	13.7
1936	81.7	62.8	63.5	18.2
1937	87.2	66.5	67.2	20.0
1938	82.3	65.4	66.0	16.3
1939	88.5	67.6	68.2	20.3
1940	95.7	70.6	71.3	24.4
1941	113.8	78.7	79.4	34.4
1942	138.4	87.1	87.8	50.6
1943	162.0	103.0	103.9	58.1
1944	180.7	111.6	112.6	68.1
1945	185.9	123.1	124.3	61.6
1946	193.4	142.8	144.1	49.4
1947	212.7	158.6	159.9	52.8
1948	238.0	171.0	172.6	65.4
1949	234.7	166.6	168.1	66.6
1950	261.8	184.8	186.3	75.5
1951	289.6	200.7	202.2	87.4
1952	306.0	215.3	216.9	89.0
1953	323.6	227.6	229.4	94.2
1954	331.0	235.2	237.2	93.8
1955	361.9	252.8	254.8	107.1
1956	377.7	265.9	268.3	109.4
1957	396.2	278.7	281.4	114.9
1958	407.7	293.6	296.5	111.2
1959	440.3	315.6	318.7	121.6
1960	456.9	331.8	334.9	122.0
1961	471.0	343.0	346.4	124.6
1962	505.4	360.4	364.2	141.2
1963	532.5	380.8	385.0	147.5
1964	577.4	406.5	411.3	166.1
1965	621.1	433.9	439.1	181.9
1966	681.3	470.8	476.6	204.8
1967	721.8	499.0	505.7	216.1
1968	771.5	536.2	543.7	227.8
1969	825.7	583.5	591.9	233.8

pattern has continued to the present. We allocate a proportion of 0.755 of personal income taxes to labor income for all years from 1959 to 1969. Prior to 1959 we use the actual proportions estimated by Ando and Brown to allocate personal income taxes to labor income. The remainder of personal income taxes are attributed to property income.

We allocate federal estate and gift taxes, state and local death and gift taxes, motor vehicle licences, personal property taxes and other taxes to property

income. We present the components of labor and property income for 1958 in Table 4. We present annual estimates of gross private national income, labor income, property income, consumer receipts and expenditures, consumption expenditures, consumer outlays, and gross private national saving in Table 5.

3. CONSUMPTION EXPENDITURES AND LABOR AND PROPERTY COMPENSATION

3.1. Introduction

In constant prices

Constant In the preceding section we have presented accounts for the income and expenditure of the U.S. private national economy in current prices. In this section we present accounts for consumption expenditures and for labor and property compensation in current prices. Consumption expenditures is a component of gross national product; methods for measurement of consumption expenditures in constant prices are well established. The quantity of labor compensation in constant prices can be interpreted as the quantity of labor services supplied to the U.S. private national economy. Similarly, the quantity of property compensation can be interpreted as the quantity of capital services supplied.

X The value of labor and property compensation differs from the corresponding values of labor and property outlay by the value of tax payments on factor incomes. Quantity indexes of labor and property services supplied are weighted by prices that exclude tax payments on factor incomes; quantity indexes of labor and property services demanded are weighted by prices that include tax payments. To reflect these differences in concept we require a detailed allocation of taxes in income from both labor and capital. We allocate taxes on income by legal form of organization and by class of assets.

3.2. Consumption Expenditures

Our definition of consumption expenditures includes the portions of *nondurable?* ~~consumable~~ *durable* goods and services output assigned to personal consumption expenditures¹² plus our imputations for consumer and institutional durables. The value of these expenditures from the consumer point of view includes retail taxes (customs duties, excise and sales taxes) and excludes subsidies. A detailed allocation of these items to various types of consumption would be desirable; we simply allocate these taxes proportionally to all components of output.

We construct a quantity index of consumption expenditures as a Divisia index of the quantity indexes of nondurables, services,¹³ and our estimate of imputed capital services.¹⁴ The price index is then computed as the ratio of consumption expenditures to the quantity index. We deflate consumer outlays by the price index of consumption expenditures. We present price and quantity indexes for consumption expenditures and consumer outlays in Table 6.

3.3. Labor Compensation *WSA*

The consuming sector includes residents of the United States and armed forces overseas. Population data are available from the *Economic Report of the*

¹²NIP (1966), Table 1.4.

¹³NIP (1966), Table 1.2.

¹⁴Christensen and Jorgenson (1969), pp. 306-307.

TABLE 6
PRIVATE NATIONAL CONSUMPTION EXPENDITURES AND
CONSUMER OUTLAYS, 1929-1969
(CONSTANT PRICES OF 1958)

Year	Consumption Expenditures and Consumer Outlays, Price Index	Consumption Expenditures, Quantity Index	Consumer Outlays, Quantity Index
1929	0.546	141.0	142.9
1930	0.527	135.5	137.5
1931	0.481	132.0	133.9
1932	0.411	121.5	123.4
1933	0.414	119.1	120.8
1934	0.437	123.3	124.8
1935	0.447	126.3	127.7
1936	0.458	137.2	138.7
1937	0.469	141.9	143.4
1938	0.457	143.0	144.4
1939	0.457	147.9	149.3
1940	0.460	153.6	155.1
1941	0.487	161.5	162.9
1942	0.526	165.6	166.9
1943	0.602	171.0	172.4
1944	0.630	177.1	178.5
1945	0.660	186.7	188.4
1946	0.730	195.5	197.3
1947	0.804	197.2	198.9
1948	0.840	203.7	205.5
1949	0.799	208.6	210.5
1950	0.845	218.7	220.5
1951	0.881	227.7	229.4
1952	0.909	236.9	238.7
1953	0.926	245.7	247.7
1954	0.932	252.3	254.5
1955	0.953	265.4	267.5
1956	0.957	277.8	280.2
1957	0.974	286.0	288.7
1958	1.000	293.6	296.5
1959	1.031	306.0	309.0
1960	1.052	315.4	318.4
1961	1.057	324.3	327.6
1962	1.071	336.4	340.0
1963	1.090	349.2	353.1
1964	1.106	367.5	371.8
1965	1.121	386.9	391.5
1966	1.157	407.0	412.0
1967	1.178	423.7	429.3
1968	1.214	441.9	448.0
1969	1.271	459.1	465.7

*President.*¹⁵ We formulate measures of leisure, the quantity of labor services, and total time available. We assume that there is no economic decision involving the time of children thirteen years of age and younger. Our measure of the time available for the total population is the time endowment for the population

¹⁵*Economic Report of the President* (1972), U.S. Government Printing Office, Washington.

fourteen years of age and older. The time endowment is twenty-four hours per day for the number of days in each year.

Labor services offered are not identified with hours actually worked. Unemployment is a measure of the number of persons willing to offer labor at the current wage rate who do not have a demand for their labor. We include a "normal workday" for the unemployed in working time. All non-working time is considered to be leisure. A case could be made for including even more in working time offered on the grounds that there is an interaction between labor force participation and unemployment rates. As unemployment is reduced, people previously discouraged from entering the labor force by high unemployment are induced to enter.¹⁶ We include in working time offered only the time of the unemployed, assuming that the average workweek is the same as for the employed.

Our data for manhours are from Kendrick.¹⁷ Kendrick provides total manhours for the farm sector, the general government sector, and the total private domestic sector. Hours for proprietors and unpaid family workers are included in his estimates. We provide our own hours estimate only for the rest of world sector. We assume that hours per man employed are equal to hours per man for the private domestic nonfarm economy. We adjust the total time endowment and the quantity of working time offered for quality change as measured by educational attainment. Both work and leisure are composed of quantities of labor services of varying qualities. Quantities of the different categories of labor services offered are combined into a Divisia quantity index of labor offered.

Our concept of labor compensation is net of personal income taxes. The effective tax rate on labor compensation is computed as the ratio of taxes on labor income to labor income including taxes. Price, quantity, and tax indexes for labor compensation are presented in Table 7.

3.4. *Property compensation*

The starting point for estimating price and quantity components of property compensation is a set of perpetual inventory estimates of stocks of each type of capital employed in measuring capital input in constant prices in the production account.¹⁸ We assume that the flow of capital services from each type of tangible asset is proportional to the stock. Real property compensation for each asset is equal to the real service flow. Similarly real property compensation from the government and rest of world sectors is proportional to the quantity of net claims on governments and foreigners.

Prices of capital input from the point of view of the producer include both direct and indirect taxes. To obtain prices for capital input from the point of

¹⁶See Bowen and Finegan (1969) and the references given there.

¹⁷These data have been compiled for John W. Kendrick's study, *Postwar Productivity Trends in the United States*, for the National Bureau of Economic Research (1972). We are indebted to Kendrick for providing us with these data in advance of publication.

¹⁸The perpetual inventory method is discussed by Goldsmith (1951) and employed extensively in his *Study of Saving* (1955) and more recent studies of U.S. national wealth (1962, 1963, 1965). This method is used in the Bureau of Economic Analysis *Capital Stock Study*. See footnote 22 below.

TABLE 7
NATIONAL LABOR COMPENSATION, 1929-1969
(CONSTANT PRICES OF 1958)

Year	Price Index	Quantity Index	Effective Tax Rate
1929	0.278	235.8	0.001
1930	0.260	234.0	0.001
1931	0.226	233.8	0.001
1932	0.185	229.0	0.001
1933	0.171	233.1	0.004
1934	0.203	224.0	0.004
1935	0.212	231.6	0.005
1936	0.227	243.5	0.005
1937	0.248	246.3	0.007
1938	0.237	242.7	0.009
1939	0.246	248.1	0.008
1940	0.261	250.5	0.009
1941	0.304	260.8	0.011
1942	0.367	274.6	0.024
1943	0.392	301.7	0.086
1944	0.424	306.8	0.086
1945	0.456	289.3	0.090
1946	0.505	259.2	0.081
1947	0.553	257.1	0.092
1948	0.606	258.9	0.081
1949	0.620	256.9	0.068
1950	0.670	260.0	0.065
1951	0.723	269.1	0.092
1952	0.759	272.7	0.103
1953	0.811	272.7	0.101
1954	0.831	269.0	0.089
1955	0.874	273.7	0.090
1956	0.928	276.7	0.094
1957	0.981	274.3	0.095
1958	1.000	271.5	0.094
1959	1.059	275.9	0.095
1960	1.093	279.7	0.099
1961	1.123	280.2	0.098
1962	1.180	283.0	0.101
1963	1.224	286.0	0.102
1964	1.306	290.4	0.090
1965	1.360	297.7	0.094
1966	1.441	306.8	0.099
1967	1.496	314.4	0.102
1968	1.591	321.2	0.111
1969	1.678	328.8	0.123

view of the owner of the asset we exclude all taxes. Excluding both direct and indirect taxes, the price of capital services becomes:

$$q_{K,t} = q_{A,t-1}r_t + q_{A,t}\delta - (q_{A,t} - q_{A,t-1}),$$

where r_t is the after-tax rate of return. The depreciation rate δ is different from zero only for structures (0.056), equipment (0.138), and consumer durables (0.200) employed in the private domestic sector. For inventories, land, and financial claims on the government and rest of world sectors the capital service

price reduces to the cost of capital $q_{A,t-1}r_t$ less revaluation of assets $q_{A,t} - q_{A,t-1}$. For a financial asset the value of capital services is equal to earnings on the asset, for example, interest payments on a bond.

To construct price and quantity indexes of property compensation for the income and expenditure account our procedure is analogous to the methods we have used for the production account, except for the treatment of taxes. Property compensation before taxes includes the property share of gross private domestic factor outlay, corporate profits and net interest originating in the foreign sector, net interest paid by government, and investment income of social insurance funds net of transfers to general government. We have described effective rates of business property taxation and corporate income taxation in our presentation of the production account.¹⁹ We now compute an effective rate of personal

TABLE 8

GROSS PRIVATE NATIONAL PROPERTY COMPENSATION BY SECTOR OF ORIGIN, 1958

<i>Corporate Property Compensation</i>		
1.	Gross private domestic outlay for corporate capital services (our imputation)	67.9
2.	- Corporate profits tax liability (Table 6.14)*	19.0
3.	- Corporate business property taxes (our imputation)	6.7
4.	- Personal income taxes attributed to corporate property income (our imputation)	3.6
5.	- Wealth taxes attributed to corporate assets (our imputation)	0.5
6.	= Corporate property compensation	38.1
<i>Noncorporate Property Compensation</i>		
1.	Gross private domestic outlay for noncorporate capital services (our imputation)	33.5
2.	- Noncorporate business property taxes (our imputation)	6.1
3.	- Personal income taxes attributed to noncorporate property income (our imputation)	3.5
4.	- Wealth taxes attributed to noncorporate assets (our imputation)	0.3
5.	= Noncorporate property compensation	23.5
<i>Household and Institutional Property Compensation</i>		
1.	Gross private domestic outlay for household and institutional capital services (our imputation)	65.6
2.	- Property taxes, owner-occupied dwellings (Table 7.3)	4.6
3.	- Personal property taxes, consumer durables (Table 3.3)	1.2
4.	- Wealth taxes attributed to household assets (our imputation)	0.6
5.	= Household and institutional property compensation	59.2
<i>Compensation from Net Claims on Government and Rest of World</i>		
1.	Net interest paid by government (Tables 3.1 and 3.3)	6.2
2.	+ Investment income of social insurance funds less transfers to general government (Table 3.7)	1.2
3.	+ Corporate profits, rest of world (Table 1.13)	1.7
4.	+ Net interest, rest of world (Table 1.13)	0.3
5.	- Personal income taxes attributed to compensation from net claims (our imputation)	1.9
6.	- Wealth taxes attributed to net claims (our imputation)	0.3
7.	= Compensation from net claims	7.2

*All table references are to *The National Income and Product Accounts of the United States, 1929-65, Statistical Tables, A Supplement to the Survey of Current Business*, August 1966.

¹⁹Christensen and Jorgenson (1970).

income taxation on property compensation net of business property taxes and the corporate income tax, and an effective rate of estate, death, and gift taxation on wealth.

We allocate federal estate and gift taxes and state and local death and gift taxes proportionally to all the components of private national wealth.²⁰ Property

TABLE 9
GROSS PRIVATE NATIONAL PROPERTY COMPENSATION BY SECTOR, 1929-1969
(CURRENT PRICES)

Year	Corporate Sector	Non-corporate Sector	Households and Institutions	Net Claims on Governments and Rest of World
1929	14.348	7.871	13.227	1.681
1930	11.598	3.570	12.558	1.547
1931	7.766	2.874	12.011	1.492
1932	4.542	0.051	8.066	1.235
1933	3.895	0.643	9.566	1.213
1934	6.368	1.444	9.171	1.413
1935	7.625	2.885	8.160	1.406
1936	9.085	4.009	9.481	1.258
1937	9.795	4.051	9.428	1.311
1938	8.311	3.638	9.801	1.324
1939	9.559	4.713	10.124	1.370
1940	11.371	5.531	10.321	1.545
1941	12.312	8.265	10.722	1.519
1942	13.971	11.281	8.965	1.715
1943	14.121	11.714	14.144	1.955
1944	15.519	15.749	14.388	2.738
1945	13.406	16.907	16.042	3.342
1946	13.015	17.345	19.866	4.221
1947	17.852	16.174	23.321	4.657
1948	24.368	17.914	25.660	5.113
1949	25.193	16.384	20.683	5.373
1950	24.628	18.363	31.570	5.321
1951	26.396	23.611	32.645	5.643
1952	27.371	21.375	37.995	5.645
1953	27.745	19.920	42.531	5.736
1954	30.020	19.682	44.606	6.345
1955	36.287	20.282	52.297	6.502
1956	35.955	17.818	53.292	6.721
1957	38.024	19.690	54.421	7.295
1958	38.104	23.507	59.222	7.216
1959	43.359	20.619	67.732	7.963
1960	43.034	19.276	71.965	8.369
1961	44.600	21.013	73.086	8.591
1962	51.516	23.729	77.429	9.633
1963	54.333	24.033	84.222	10.202
1964	61.069	24.645	90.617	11.651
1965	69.903	27.774	95.100	12.201
1966	76.634	32.594	105.157	12.755
1967	77.569	34.347	111.899	13.748
1968	79.543	32.595	117.930	14.845
1969	79.261	30.532	131.679	14.457

²⁰NIP (1966), Tables 3.1 and 3.3.

income from assets in the household sector is not subject to personal income taxation; thus we must allocate personal income taxes attributed to property compensation among the corporate, noncorporate, government, and foreign sectors. A detailed allocation of personal income taxes to the various types of property compensation would be desirable; we simply allocate the taxes

TABLE 10
GROSS PRIVATE NATIONAL PROPERTY COMPENSATION, RATES OF RETURN ON CAPITAL,
1929-1969
a. Nominal rates of return

Year	Corporate Sector	Non-Corporate Sector	Households and Institutions	Net Claims on Governments and Rest of World	Private National Economy
1929	0.076	0.056	0.029	0.078	0.053
1930	-0.008	-0.067	-0.031	0.042	-0.028
1931	-0.065	-0.117	-0.092	-0.017	-0.084
1932	-0.091	-0.141	-0.151	0.036	-0.113
1933	-0.005	0.010	0.017	0.043	0.012
1934	0.082	0.062	0.090	0.108	0.083
1935	0.062	0.049	0.002	0.032	0.034
1936	0.078	0.071	0.059	0.009	0.060
1937	0.131	0.073	0.078	0.034	0.084
1938	0.029	-0.005	0.032	-0.001	0.017
1939	0.052	0.027	0.019	0.007	0.027
1940	0.096	0.070	0.041	0.002	0.056
1941	0.154	0.159	0.092	0.088	0.123
1942	0.181	0.187	0.079	0.109	0.136
1943	0.129	0.156	0.096	0.100	0.098
1944	0.124	0.172	0.103	-0.025	0.087
1945	0.077	0.170	0.080	-0.017	0.066
1946	0.158	0.265	0.125	0.027	0.123
1947	0.243	0.253	0.186	0.008	0.154
1948	0.140	0.141	0.114	0.018	0.099
1949	0.055	0.036	-0.021	0.024	0.020
1950	0.096	0.152	0.074	0.042	0.087
1951	0.136	0.161	0.085	0.028	0.100
1952	0.062	0.065	0.040	0.024	0.047
1953	0.048	0.048	0.027	0.034	0.038
1954	0.048	0.067	0.017	0.030	0.037
1955	0.076	0.073	0.055	0.029	0.058
1956	0.103	0.092	0.071	0.034	0.076
1957	0.086	0.096	0.054	0.032	0.066
1958	0.049	0.097	0.037	0.037	0.051
1959	0.065	0.064	0.064	0.041	0.060
1960	0.050	0.069	0.051	0.042	0.053
1961	0.050	0.076	0.046	0.031	0.050
1962	0.068	0.082	0.056	0.040	0.061
1963	0.067	0.073	0.061	0.034	0.060
1964	0.080	0.075	0.069	0.030	0.067
1965	0.094	0.092	0.050	0.039	0.072
1966	0.104	0.100	0.069	0.035	0.079
1967	0.095	0.094	0.085	0.023	0.080
1968	0.089	0.092	0.088	0.034	0.081
1969	0.087	0.087	0.093	0.041	0.082

TABLE 10—continued

b. Own rates of return

Year	Corporate sector	Non-Corporate Sector	Households and Institutions	Net claims on Governments and Rest of World	Private National Economy
1929	0.074	0.058	0.012	0.052	0.044
1930	0.050	0.016	0.008	0.047	0.025
1931	0.022	0.010	0.014	0.044	0.018
1932	-0.002	-0.019	-0.001	0.035	-0.002
1933	-0.004	-0.012	0.019	0.033	0.007
1934	0.026	-0.002	0.015	0.036	0.017
1935	0.042	0.017	0.009	0.031	0.023
1936	0.060	0.031	0.020	0.027	0.034
1937	0.063	0.027	0.013	0.026	0.031
1938	0.040	0.020	0.011	0.026	0.023
1939	0.056	0.033	0.015	0.025	0.032
1940	0.075	0.042	0.014	0.027	0.038
1941	0.076	0.069	0.008	0.025	0.043
1942	0.074	0.089	-0.020	0.024	0.037
1943	0.067	0.085	0.011	0.018	0.042
1944	0.075	0.115	0.008	0.018	0.048
1945	0.057	0.119	0.016	0.016	0.045
1946	0.046	0.115	0.037	0.018	0.046
1947	0.057	0.086	0.034	0.019	0.044
1948	0.070	0.079	0.025	0.021	0.045
1949	0.060	0.061	-0.003	0.023	0.032
1950	0.054	0.068	0.025	0.022	0.040
1951	0.049	0.081	0.010	0.024	0.037
1952	0.042	0.062	0.017	0.024	0.034
1953	0.037	0.054	0.024	0.023	0.033
1954	0.040	0.051	0.024	0.025	0.033
1955	0.056	0.051	0.036	0.024	0.042
1956	0.045	0.036	0.026	0.025	0.033
1957	0.040	0.039	0.019	0.027	0.030
1958	0.034	0.048	0.022	0.026	0.031
1959	0.043	0.035	0.033	0.027	0.035
1960	0.039	0.029	0.034	0.028	0.033
1961	0.039	0.033	0.032	0.028	0.033
1962	0.050	0.038	0.035	0.030	0.039
1963	0.051	0.036	0.039	0.031	0.040
1964	0.059	0.035	0.041	0.035	0.044
1965	0.068	0.039	0.040	0.035	0.047
1966	0.070	0.046	0.045	0.036	0.050
1967	0.058	0.044	0.043	0.037	0.047
1968	0.052	0.036	0.039	0.038	0.042
1969	0.042	0.027	0.042	0.036	0.038

proportionately to all non-household property compensation after corporate and property taxes. The effective rate of personal income taxation on property compensation is computed as the ratio of personal income taxes to non-household property compensation before personal taxation. A detailed breakdown of property compensation by sector for 1958, including the allocation of taxes, is presented in Table 8; property compensation by sector annually is presented in Table 9.

The after tax return to capital in each sector includes property compensation, net of all taxes; it also includes capital gains and excludes economic depreciation. Our estimates of capital gains and economic depreciation for corporate and noncorporate tangible assets are discussed in detail in Christensen and Jorgenson.²¹ Depreciation is zero for the financial assets, which constitute net

TABLE 11
GROSS PRIVATE NATIONAL PROPERTY COMPENSATION, 1929-1969
(CONSTANT PRICES OF 1958)

Year	Corporate, Price Index	Corporate, Quantity Index	Non- Corporate, Price Index	Non- Corporate, Quantity Index	Households and Institutions, Price Index
1929	0.056	257.9	0.039	200.9	0.048
1930	0.044	264.0	0.017	212.2	0.045
1931	0.029	263.4	0.013	216.0	0.044
1932	0.018	255.5	0.000	214.9	0.031
1933	0.016	237.2	0.003	208.6	0.039
1934	0.029	221.5	0.007	202.6	0.039
1935	0.036	213.8	0.015	197.6	0.036
1936	0.043	209.5	0.020	197.5	0.042
1937	0.046	211.6	0.020	201.8	0.041
1938	0.038	216.9	0.017	211.4	0.041
1939	0.045	212.8	0.022	211.3	0.043
1940	0.053	212.8	0.026	213.4	0.043
1941	0.056	219.2	0.038	216.7	0.043
1942	0.060	230.9	0.051	221.9	0.034
1943	0.061	229.7	0.053	219.5	0.055
1944	0.069	225.0	0.073	215.3	0.059
1945	0.061	222.2	0.079	214.2	0.069
1946	0.057	227.0	0.081	214.8	0.088
1947	0.073	245.2	0.073	220.6	0.093
1948	0.092	266.1	0.079	227.3	0.092
1949	0.089	282.8	0.069	238.6	0.067
1950	0.085	290.6	0.074	248.0	0.094
1951	0.086	306.0	0.090	261.4	0.086
1952	0.084	326.0	0.079	270.6	0.094
1953	0.082	339.8	0.072	276.1	0.100
1954	0.085	353.3	0.070	281.4	0.099
1955	0.100	363.1	0.071	286.2	0.110
1956	0.095	380.4	0.061	293.6	0.104
1957	0.095	401.0	0.066	297.9	0.101
1958	0.091	418.1	0.078	302.0	0.105
1959	0.102	424.7	0.068	305.0	0.118
1960	0.098	438.1	0.062	310.3	0.120
1961	0.098	454.3	0.067	315.7	0.117
1962	0.111	465.2	0.074	319.9	0.121
1963	0.113	482.2	0.073	328.1	0.128
1964	0.122	500.6	0.073	337.4	0.130
1965	0.133	525.0	0.080	347.8	0.129
1966	0.138	556.8	0.090	361.5	0.134
1967	0.129	599.7	0.092	374.3	0.134
1968	0.125	634.3	0.084	386.3	0.135
1969	0.119	667.8	0.076	400.9	0.143

²¹Christensen and Jorgenson (1969).

TABLE 11—continued

Year	Households and Institutions, Quantity Index	Government and Rest of World, Price Index	Government and Rest of World, Quantity Index	Private National, Price Index	Private National, Quantity Index
1929	273.9	0.048	35.1	0.045	834.0
1930	278.2	0.044	35.0	0.034	854.7
1931	272.8	0.041	36.3	0.028	849.8
1932	263.0	0.031	40.0	0.017	830.7
1933	246.3	0.029	42.3	0.020	784.7
1934	232.5	0.032	44.2	0.025	745.3
1935	224.4	0.030	47.3	0.028	725.8
1936	223.6	0.025	49.5	0.033	721.3
1937	230.6	0.025	53.2	0.033	738.2
1938	237.5	0.024	54.6	0.030	760.9
1939	235.5	0.023	59.0	0.034	756.2
1940	240.5	0.024	63.8	0.038	766.8
1941	250.2	0.022	67.8	0.041	791.3
1942	263.4	0.023	75.1	0.043	828.7
1943	255.3	0.018	108.4	0.050	831.1
1944	243.9	0.018	153.7	0.059	823.6
1945	232.4	0.016	209.8	0.061	822.7
1946	225.4	0.017	255.8	0.066	831.1
1947	249.7	0.018	259.0	0.070	888.5
1948	279.5	0.020	257.2	0.075	956.5
1949	307.9	0.021	253.7	0.066	1019.7
1950	337.0	0.020	260.5	0.074	1074.0
1951	379.7	0.022	250.9	0.077	1154.3
1952	404.9	0.023	249.2	0.076	1216.0
1953	423.7	0.022	257.3	0.076	1262.9
1954	450.2	0.024	265.9	0.076	1320.0
1955	474.3	0.024	275.5	0.084	1369.8
1956	513.2	0.024	275.5	0.079	1447.5
1957	539.5	0.026	276.0	0.079	1510.0
1958	562.0	0.026	282.3	0.082	1564.2
1959	574.0	0.027	294.7	0.088	1594.1
1960	599.3	0.028	296.6	0.087	1648.7
1961	622.3	0.029	298.4	0.086	1703.1
1962	639.4	0.031	307.0	0.093	1744.9
1963	666.5	0.032	315.3	0.095	1809.8
1964	699.5	0.036	321.4	0.100	1884.3
1965	737.9	0.037	333.8	0.104	1975.9
1966	785.4	0.037	340.9	0.109	2088.5
1967	832.8	0.039	353.0	0.107	2215.5
1968	872.6	0.039	378.6	0.105	2326.9
1969	923.3	0.037	395.4	0.104	2450.2

claims on governments and foreigners. Capital gains on net claims on foreigners are computed as the yearly increase in net claims less net private foreign investment. Capital gains on net claims on governments are computed as the yearly increase in net claims on governments less the current government deficit. These items are discussed in greater detail below.

The after tax rate of return in each sector is computed by dividing the after tax return to capital by the value of assets. These rates of return are nominal

or money rates. We also compute the real or own rates of return by excluding capital gains from the return to capital. Nominal and own rates of return for each sector and for the private national economy are presented in Table 10.

We have determined the after tax rates of return and we can now estimate the price of capital services for each asset from the formula above as a function of the rate of return, the depreciation rate, and the current and lagged acquisition price. The after tax property compensation of each asset in each sector is the product of the capital service price and the quantity of capital. Real property income for each sector and the private national economy is obtained as a Divisia quantity index of real property income from each asset. The price indexes for property income are computed as the ratios of property income to the quantity indexes. The price and quantity indexes for property income for each sector are presented in Table 11.

4. ACCUMULATION AND REVALUATION

4.1. Introduction

The fundamental accounting identity for the accumulation account is that gross private national saving, taken from the income and expenditure account, is equal to gross private national capital formation. Gross private national saving may be expressed as the sum of depreciation and net private national

TABLE 12
GROSS PRIVATE NATIONAL CAPITAL FORMATION, SAVING, AND REVALUATION, 1958
(CURRENT PRICES)

<i>Saving</i>	
1. Personal saving (Table 2.1)*	22.3
2. + Undistributed corporate profits (Table 5.1)	10.8
3. + Corporate inventory valuation adjustment (Table 5.1)	-0.3
4. + Corporate capital consumption allowances (Table 5.1)	22.0
5. + Noncorporate capital consumption allowances (Table 5.1)	16.9
6. + Wage accruals less disbursements (Table 5.1)	0.0
7. + Personal consumption expenditures, durable goods (Table 1.1)	37.9
8. + Surplus, social insurance funds (Table 3.7)	0.0
9. + Statistical discrepancy (Table 1.9)	1.6
10. = Gross private national saving	111.2
11. - Depreciation (our imputation)	80.8
12. = Net private national saving	30.4
13. + Revaluation (our imputation)	31.6
14. = Change in private national wealth	62.1
<i>Capital Formation</i>	
1. Gross private domestic investment (Table 1.2)	60.9
2. + Personal consumption expenditures, durable goods (Table 1.1)	37.9
3. + Deficit of federal government (Table 3.1)	10.2
4. + Deficit of state and local governments (Table 3.3)	2.3
5. - Deficit, federal social insurance funds (Table 3.7)	-1.6
6. - Deficit, state and local social insurance funds (Table 3.7)	1.7
7. + Net foreign investment (Table 5.1)	-0.2
8. = Gross private national capital formation	111.2

*All table references are to *The National Income and Product Accounts of the United States, 1929-65, Statistical Tables, A Supplement to the Survey of Current Business*, August 1966.

saving. Net private national saving is equal to the change in wealth from period to period less revaluation of assets. Gross private national capital formation can be expressed as the sum of replacement and net private national capital formation. We present data in constant prices for saving and capital formation, both gross and net, and for depreciation, replacement, and revaluation.

TABLE 13
GROSS PRIVATE NATIONAL CAPITAL FORMATION, SAVING, AND REVALUATION,
1929-1969 (CURRENT PRICES)

Year	Gross Private National Saving and Capital Formation	Replacement and Depreciation	Net Private National Saving and Capital Formation	Revaluation	Change in Wealth
1929	25.4	19.2	6.2	3.5	9.7
1930	18.6	19.0	-0.4	-22.0	-22.4
1931	14.3	17.2	-2.8	-39.9	-42.7
1932	6.7	14.7	-8.0	-38.7	-46.7
1933	6.5	13.3	-6.7	1.7	-5.0
1934	10.5	13.5	-2.9	19.8	18.9
1935	13.7	12.9	0.7	3.4	4.2
1936	18.2	12.9	5.3	8.0	13.3
1937	20.0	14.1	5.9	17.4	23.2
1938	16.3	14.8	1.4	-2.1	-0.7
1939	20.3	14.5	5.8	-1.5	4.3
1940	24.4	15.0	9.4	6.2	15.7
1941	34.4	16.8	17.6	30.2	47.8
1942	50.6	20.3	30.3	41.7	72.0
1943	58.1	20.9	37.2	27.6	64.7
1944	68.1	21.7	46.5	21.8	68.3
1945	61.6	21.7	39.9	13.1	53.0
1946	49.4	22.9	26.4	52.3	78.8
1947	52.8	28.4	24.4	83.4	107.8
1948	65.4	33.9	31.5	46.7	78.2
1949	66.6	37.9	28.8	-11.1	17.6
1950	75.5	41.8	33.7	45.4	79.0
1951	87.4	49.6	37.8	65.2	103.0
1952	89.0	53.8	35.2	15.7	50.9
1953	94.2	56.5	37.7	5.6	43.3
1954	93.8	59.2	34.6	4.9	39.5
1955	107.1	62.3	44.8	21.6	66.4
1956	109.4	69.8	39.6	58.2	97.8
1957	114.9	76.5	38.4	52.5	90.9
1958	111.2	80.8	30.4	31.6	62.1
1959	121.6	83.7	37.9	39.7	77.6
1960	122.0	86.7	35.3	32.4	67.7
1961	124.6	89.7	34.9	29.2	54.1
1962	141.2	92.4	48.8	41.0	89.8
1963	147.5	96.3	51.2	37.6	88.8
1964	166.1	101.5	64.6	45.6	110.3
1965	181.9	107.5	74.5	52.4	126.9
1966	204.8	115.7	89.0	64.4	153.4
1967	216.1	127.2	88.9	79.1	168.1
1968	227.8	138.5	89.3	98.8	188.1
1969	233.8	152.0	81.8	120.8	202.6

X Gross private national capital formation is equal to gross private domestic investment, as defined in the U.S. national accounts, plus personal consumption expenditures on durable goods, plus the current deficits of the federal and state and local ~~social insurance funds~~ ^{social insurance funds}, plus the current surpluses of federal and state and local social insurance funds, plus net foreign investment. The components of gross private national saving and gross private national capital formation

TABLE 14
CHANGE IN PRIVATE NATIONAL WEALTH, 1929-1969 (CURRENT PRICES)

Year	Change in Value of Private Domestic Tangible Assets	Net Capital Formation, Private Domestic Tangible Assets	Capital Gains, Private Domestic Tangible Assets	Change in Value of Net Claims on Governments and Foreigners
1929	9.1	6.4	2.6	0.8
1930	-23.4	-1.6	-21.8	1.0
1931	-43.9	-6.0	-37.9	1.2
1932	-48.9	-10.2	-38.7	2.1
1933	-7.2	-8.5	1.3	2.1
1934	10.8	-6.2	17.0	5.8
1935	2.0	-1.4	3.4	2.2
1936	10.9	2.0	8.8	2.6
1937	21.7	4.7	17.0	1.7
1938	-3.6	-2.9	-0.8	2.7
1939	0.9	1.5	-0.5	3.4
1940	13.7	6.0	7.7	2.1
1941	37.5	11.1	26.4	10.6
1942	32.8	-3.0	35.7	39.7
1943	20.3	-8.1	28.4	44.9
1944	20.6	-7.8	28.4	47.7
1945	16.0	-3.8	19.8	36.3
1946	73.2	23.2	50.0	5.3
1947	111.9	26.0	86.0	-4.2
1948	81.5	34.1	47.4	-4.0
1949	10.9	22.3	-11.4	6.5
1950	83.6	43.1	40.4	-4.1
1951	103.5	39.5	64.0	-0.5
1952	42.9	27.2	15.7	7.8
1953	32.8	29.9	2.9	11.0
1954	28.5	25.0	3.5	10.6
1955	65.1	44.7	20.4	1.2
1956	94.9	39.1	55.7	2.9
1957	83.1	31.9	51.2	7.5
1958	46.6	18.0	28.6	15.4
1959	71.8	36.1	35.6	6.0
1960	61.4	33.3	28.1	6.1
1961	54.4	26.2	28.2	9.9
1962	78.0	40.1	37.9	11.7
1963	81.4	44.7	36.8	7.2
1964	99.3	52.0	47.3	11.2
1965	117.5	66.6	50.9	8.9
1966	141.0	76.3	64.7	12.3
1967	146.9	62.5	84.5	21.1
1968	172.0	71.5	100.5	15.4
1969	196.3	77.5	118.8	5.9

TABLE 14—*continued*

Year	Net Capital Formation, Net Claims on Govern- ments and Rest of World	Capital Gains, Net Claims on Govern- ments and Rest of World	Change in Private National Wealth
1929	-0.0	0.8	9.7
1930	1.2	-0.2	-22.4
1931	3.2	-2.1	-42.7
1932	2.1	0.0	-46.7
1933	1.7	0.4	-5.0
1934	3.0	2.8	16.9
1935	2.1	0.1	4.2
1936	3.4	-0.8	13.3
1937	1.3	0.4	23.2
1938	4.1	-1.4	-0.7
1939	4.4	-1.0	4.3
1940	3.5	-1.4	15.7
1941	6.9	3.8	47.8
1942	33.8	5.9	72.0
1943	45.8	-0.8	64.7
1944	54.3	-6.6	68.3
1945	43.0	-6.7	53.0
1946	3.0	2.3	78.8
1947	-1.6	-2.6	107.8
1948	-3.3	-0.7	78.2
1949	6.3	0.2	17.6
1950	-9.1	5.0	79.0
1951	-1.6	1.1	103.0
1952	7.7	0.0	50.9
1953	8.3	2.7	43.3
1954	9.3	1.4	39.5
1955	0.1	1.1	66.4
1956	0.5	2.5	97.8
1957	6.2	1.3	90.9
1958	12.4	3.0	62.1
1959	1.9	4.1	77.6
1960	1.8	4.3	67.7
1961	8.9	1.0	64.1
1962	8.7	3.1	89.8
1963	6.4	0.9	88.8
1964	12.8	-1.7	110.3
1965	7.5	1.5	126.9
1966	12.5	-0.3	153.4
1967	26.4	-5.3	168.1
1968	17.2	-1.7	188.1
1969	3.9	2.0	202.6

for 1958 are presented in Table 12, along with replacement, depreciation, and revaluation. Annual estimates are presented in Table 13. The annual change in wealth can be represented as net capital formation plus capital gains. Annual estimates of these magnitudes for private domestic tangible assets and for net claims on the government and rest of world sectors are presented in Table 14.

4.2. Capital Formation

We divide the components of gross private national capital formation into prices and quantities using the following deflators: The implicit deflators from the U.S. National Income and Product Accounts are used for investment in producer and consumer durables and in farm and nonfarm inventories. For residential and non-residential structures we use the "constant cost 2" price index for structures from the Bureau of Economic Analysis *Capital Stock Study* for both capital formation and replacement.²² We have constructed price indexes for claims on the government and rest of world sectors from data on changes in the value of claims from period to period and data on the corresponding components of capital formation from the U.S. national accounts. We set the price of claims of each type equal to 1.000 in 1958 and the quantity in 1958 equal to the value of outstanding claims in that year. These price indexes are then used to deflate the government deficit and net foreign investment.

To construct an index of the quantity of gross private national capital formation we first construct a Divisia index of the quantities of investment in producer and consumer durables, residential and nonresidential structures, and the quantity indexes of net foreign investment and government deficits. Real investment in inventories of durable and nondurable goods are added to the Divisia index to obtain the quantity index of gross private national capital formation. The price index of replacement is computed as the ratio of the value of replacement to the Divisia index of replacement. The price and quantity indexes of gross private national capital formation and replacement are presented in Table 15.

4.3. Accumulation and Revaluation

The value of gross private national saving is taken from the income and expenditure account. To construct the saving side of the accumulation account in constant prices we begin with gross private national capital formation in constant prices. The capital formation and saving sides of the accumulation account are equal in both current and constant prices. To complete the accumulation and revaluation account in constant prices we must construct accounts for depreciation and revaluation of assets in constant prices.

If the decline in efficiency of capital goods is geometric the change in wealth from period to period for a single capital good may be written:

$$\begin{aligned} W_t - W_{t-1} &= q_{A,t}K_t - q_{A,t-1}K_{t-1}, \\ &= q_{A,t}(K_t - K_{t-1}) + (q_{A,t} - q_{A,t-1})K_{t-1}, \\ &= q_{A,t}A_t - q_{A,t}\delta K_{t-1} + (q_{A,t} - q_{A,t-1})K_{t-1}. \end{aligned}$$

Gross saving is represented by $q_{A,t}A_t$, which is equal to gross capital formation and has the same price and quantity components. Depreciation is represented by $q_{A,t}\delta K_{t-1}$ and is equal to replacement; the price and quantity components of depreciation differ from the price and quantity components of replacement.

²²The Bureau of Economic Analysis *Capital Stock Study* is reported in a series of articles. See Grose, Rottenberg, and Wasson (1969) and the references given there. We are indebted to Robert Wasson for permission to use the underlying data on investment in current and constant prices.

TABLE 15
GROSS PRIVATE NATIONAL CAPITAL FORMATION, 1929-1969
(CONSTANT PRICES OF 1958)

Year	Gross Private National Capital Formation, Price Index	Gross Private National Capital Formation, Quantity Index	Replacement, Price Index	Replacement, Quantity Index
1929	0.474	53.6	0.463	41.3
1930	0.473	39.3	0.449	42.3
1931	0.471	30.5	0.411	41.8
1932	0.441	15.2	0.365	40.2
1933	0.423	15.5	0.352	37.7
1934	0.483	21.8	0.379	35.5
1935	0.429	31.8	0.379	34.1
1936	0.436	41.8	0.381	33.8
1937	0.434	46.1	0.408	34.6
1938	0.490	33.2	0.416	35.7
1939	0.467	43.4	0.410	35.3
1940	0.460	53.2	0.418	35.8
1941	0.510	67.5	0.453	37.2
1942	0.765	66.1	0.516	39.2
1943	0.848	68.5	0.551	38.0
1944	0.861	79.1	0.595	36.4
1945	0.822	75.0	0.617	35.2
1946	0.661	74.6	0.655	35.0
1947	0.728	72.5	0.741	38.3
1948	0.798	82.0	0.792	42.9
1949	0.809	82.4	0.799	47.4
1950	0.803	94.1	0.817	51.2
1951	0.885	98.8	0.880	56.3
1952	0.906	98.3	0.898	59.9
1953	0.903	104.2	0.901	62.7
1954	0.906	103.6	0.895	66.2
1955	0.904	118.4	0.901	69.2
1956	0.949	115.3	0.945	73.9
1957	0.989	116.2	0.986	77.6
1958	1.000	111.2	1.000	80.8
1959	1.017	119.5	1.017	82.2
1960	1.020	119.5	1.018	85.2
1961	1.018	122.4	1.017	88.2
1962	1.027	137.5	1.023	90.3
1963	1.030	143.2	1.026	93.8
1964	1.040	159.8	1.035	98.1
1965	1.048	173.6	1.040	103.4
1966	1.059	193.4	1.051	110.2
1967	1.081	199.9	1.080	117.7
1968	1.117	204.0	1.116	124.2
1969	1.164	200.9	1.155	131.6

We construct the quantity index of depreciation as a Divisia index of the quantities of lagged capital stocks with depreciation shares as weights. The quantity index of replacement is a Divisia index of the quantities of replacement with replacement shares as weights. Under geometric decline in efficiency the weights

are the same for replacement and depreciation, so that the quantity indexes for depreciation and replacement are proportional. The price index of depreciation is computed as the ratio of depreciation to the quantity index of depreciation.

Revaluation is represented by $(q_{A,t} - q_{A,t-1})K_{t-1}$. We construct a quantity index of revaluation as a Divisia index of the various lagged capital stocks with

TABLE 16
GROSS PRIVATE NATIONAL SAVING, DEPRECIATION, AND REVALUATION, 1929-1969
(CONSTANT PRICES OF 1958)

Year	Gross Private National Saving, Price Index	Gross Private National Saving, Quantity Index	Depreciation, Price Index	Depreciation, Quantity Index	Revaluation, Price Index	Revaluation, Quantity Index
1929	0.474	53.6	0.046	418.3	0.003	1200.3
1930	0.473	39.3	0.044	428.3	-0.018	1214.8
1931	0.471	30.5	0.041	422.8	-0.033	1212.2
1932	0.441	15.2	0.036	407.1	-0.032	1200.5
1933	0.423	15.5	0.035	381.3	0.001	1293.4
1934	0.483	21.8	0.037	359.2	0.015	1361.8
1935	0.429	31.8	0.037	345.4	0.003	1298.2
1936	0.436	41.8	0.038	342.1	0.006	1301.3
1937	0.434	46.1	0.040	350.3	0.013	1299.7
1938	0.490	33.2	0.041	361.3	-0.002	1384.7
1939	0.467	43.4	0.041	357.6	-0.001	1445.9
1940	0.460	53.2	0.041	362.6	0.004	1491.5
1941	0.510	67.5	0.045	376.3	0.020	1514.1
1942	0.765	66.1	0.051	396.8	0.026	1581.3
1943	0.848	68.5	0.054	384.6	0.017	1598.6
1944	0.861	79.1	0.059	368.4	0.015	1470.6
1945	0.822	75.0	0.061	355.7	0.010	1260.3
1946	0.661	74.6	0.065	354.4	0.044	1188.0
1947	0.728	72.5	0.073	387.8	0.067	1235.3
1948	0.798	82.0	0.078	433.9	0.036	1287.3
1949	0.809	82.4	0.079	479.4	-0.008	1317.4
1950	0.803	94.1	0.081	518.1	0.035	1314.2
1951	0.885	98.8	0.087	570.0	0.048	1367.2
1952	0.906	98.3	0.089	606.5	0.011	1411.0
1953	0.903	104.2	0.089	634.2	0.004	1456.7
1954	0.906	103.6	0.088	670.0	0.003	1469.6
1955	0.904	118.4	0.089	699.7	0.015	1446.6
1956	0.949	115.3	0.093	747.6	0.039	1489.3
1957	0.989	116.2	0.097	785.1	0.034	1534.5
1958	1.000	111.2	0.099	817.7	0.020	1564.2
1959	1.017	119.5	0.101	832.1	0.025	1581.2
1960	1.020	119.5	0.101	862.1	0.020	1599.1
1961	1.018	122.4	0.101	892.3	0.018	1603.7
1962	1.027	137.5	0.101	913.9	0.025	1613.3
1963	1.030	143.2	0.101	949.4	0.023	1627.5
1964	1.040	159.8	0.102	992.2	0.028	1641.8
1965	1.048	173.6	0.103	1045.7	0.032	1659.1
1966	1.059	193.4	0.104	1114.7	0.038	1684.7
1967	1.081	199.9	0.107	1190.9	0.046	1721.1
1968	1.117	204.0	0.110	1256.4	0.056	1751.6
1969	1.164	200.9	0.114	1331.9	0.067	1791.3

revaluation shares as weights. The price index of revaluation is computed as the ratio of revaluation to the quantity index of revaluation. Price and quantity index numbers of gross private national saving, depreciation, and revaluation are presented in Table 16.

4.4 *Standard of Living*

At this point we can consolidate the receipt and expenditure account with the accumulation account to obtain a consolidated receipt and expenditure account. In the consolidated account consumer receipts are equal to the sum of consumer outlays and gross capital formation. Price and quantity index numbers for factor income can be constructed by combining Divisia index numbers of labor and property income into a Divisia index of factor income. The weights for labor and property are the relative shares of labor and property compensation in the value of total factor income. We use the price index of factor income to deflate government transfer payments to persons other than social insurance benefits. Adding deflated transfer payments to the quantity index of factor income provides an index of total real consumer receipts. The construction of an index of total real consumer receipts is analogous to the construction of an index of total factor input in the production account; the scope of transactions covered by the two indexes is different and consumer receipts are net of both direct and indirect taxes in the consolidated consumer receipts and expenditures account.

Price and quantity index numbers for total expenditures can be constructed by combining Divisia index numbers of consumer outlays and capital formation into a Divisia index of total expenditures. The weights for consumer outlays and capital formation are the relative shares of these components of expenditure in the value of total expenditure. The price and quantity indexes of expenditures are analogous to indexes for total product in the production account; the scope of transactions is different and expenditures includes sales and excise taxes, while the value of total product excludes such taxes.

The standard of living may be defined as the ratio of real expenditures to real receipts or, equivalently, the ratio of the price of factor income to the price of expenditures. A Divisia index of the standard of living may be defined as the ratio of Divisia indexes of the quantity of expenditures to the quantity of consumer receipts or, equivalently, the ratio of Divisia indexes of the price of factor income to the price of consumer expenditures. Divisia price and quantity indexes of consumer receipts and total expenditures and the standard of living for the U.S. private national economy are given in Table 17 for 1929-1969.

5. PRIVATE NATIONAL WEALTH

5.1 *Introduction*

We now describe accounts for the wealth of private households and institutions and its distribution as claims against the producing sector and the foreign sector and the government sectors. The tangible assets of private households and institutions are included among the assets of the producing sector. Total claims against the producing sector by private households and institutions are equal

TABLE 17
GROSS PRIVATE NATIONAL EXPENDITURES, RECEIPTS, AND STANDARD OF LIVING,
1929-1969 (CONSTANT PRICES OF 1958)

Year	Gross Private National Expenditures, Price Index	Gross Private National Expenditures, Quantity Index	Gross Private National Consumer Receipts, Price Index	Gross Private National Consumer Receipts, Quantity Index	Standard of Living Index
1929	0.531	194.8	0.346	298.8	0.652
1930	0.516	176.3	0.303	300.4	0.587
1931	0.479	164.3	0.259	304.3	0.540
1932	0.416	138.1	0.193	297.1	0.465
1933	0.416	135.8	0.191	296.7	0.458
1934	0.444	146.5	0.230	283.6	0.517
1935	0.443	159.6	0.245	288.8	0.553
1936	0.453	180.4	0.271	301.9	0.598
1937	0.461	189.2	0.289	301.7	0.627
1938	0.464	177.4	0.273	301.8	0.588
1939	0.459	192.9	0.290	305.6	0.631
1940	0.459	208.5	0.310	308.6	0.676
1941	0.493	230.9	0.356	319.7	0.722
1942	0.594	233.0	0.413	335.1	0.695
1943	0.672	241.0	0.451	358.8	0.672
1944	0.695	259.9	0.498	363.0	0.716
1945	0.704	263.9	0.529	351.1	0.752
1946	0.710	272.3	0.582	332.5	0.819
1947	0.782	272.0	0.632	336.6	0.808
1948	0.827	287.7	0.693	343.5	0.837
1949	0.801	293.1	0.674	348.4	0.841
1950	0.832	314.6	0.735	355.6	0.885
1951	0.882	328.3	0.783	369.9	0.887
1952	0.908	337.1	0.808	378.9	0.890
1953	0.919	352.0	0.846	382.6	0.920
1954	0.924	358.2	0.861	384.3	0.932
1955	0.938	385.8	0.920	393.3	0.981
1956	0.955	395.6	0.937	402.9	0.982
1957	0.978	405.0	0.977	405.7	0.998
1958	1.000	407.7	1.000	407.7	1.000
1959	1.027	428.6	1.063	414.2	1.035
1960	1.043	438.0	1.081	422.5	1.037
1961	1.047	450.0	1.101	427.6	1.052
1962	1.059	477.3	1.166	433.5	1.101
1963	1.074	496.0	1.205	441.9	1.123
1964	1.088	530.9	1.277	452.2	1.174
1965	1.101	564.3	1.329	467.2	1.208
1966	1.128	603.9	1.404	485.4	1.244
1967	1.150	627.7	1.432	504.1	1.245
1968	1.186	650.7	1.483	520.2	1.251
1969	1.240	665.9	1.534	538.2	1.237

to the value of the tangible assets of the producing sector plus net claims against foreign and government sectors by the producing sector. The remainder of private wealth consists of claims against the foreign and government sectors by private households and institutions. Total wealth is the sum of private domestic tangible

assets and net claims against the foreigners and government sectors. Private national wealth is the value of private domestic tangible assets plus net claims on foreigners and governments including claims held by the producing sector and claims held directly by private households and institutions. The value of private domestic tangible assets is simply the stock of all such assets, evaluated at current prices.

5.2. Wealth in Current Prices

Our measurement of net claims on foreigners and governments is based on the flow of funds accounts of the Board of Governors of the Federal Reserve System,²³ *Studies in the National Balance Sheet of the United States* and *The National Wealth of the United States in the Postwar Period* by Raymond Goldsmith.²⁴ We distinguish between monetary and non-monetary claims on the federal government by the private sector. Monetary claims include vault cash of commercial banks, member bank reserves, and currency outside banks.²⁵ Non-monetary claims on the federal government include U.S. government total

TABLE 18
PRIVATE NATIONAL WEALTH, 1958 (CURRENT PRICES)

1.	Private domestic tangible assets ^a		1300.1
2.	+ Net claims on the federal, state, and local governments		280.9
	a. Federal, monetary	50.6	
	(i) + Vault cash of commercial banks ^b	3.2	
	(ii) + Member bank reserves ^b	18.5	
	(iii) + Currency outside banks ^b	28.9	
	b. Federal, non-monetary	195.2	
	(i) U.S. government total liabilities ^b	256.4	
	(ii) - U.S. government financial assets ^b	50.0	
	(iii) + Net liabilities, federally-sponsored credit agencies ^b	0.5	
	(iv) + Assets of included social insurance funds ^c	30.4	
	(v) - U.S. government liabilities to rest of world ^d	8.8	
	(vi) + U.S. government credits and claims abroad ^d	18.3	
	(vii) - Monetary liabilities ^b	50.6	
	c. State and local	35.1	
	(i) State and local government total liabilities ^b	62.6	
	(ii) - State and local government financial assets ^b	27.7	
	(iii) + Assets of cash sickness compensation fund (our imputation)	0.2	
3.	+ Net claims on the rest of world		13.8
	a. Private U.S. assets and investments abroad ^d	41.1	
	b. - Private U.S. liabilities to foreigners ^d	27.3	
4.	= Private national wealth		1594.7

^aChristensen and Jorgenson (1969; see pp. 294-301 for a discussion).

^bBoard of Governors of the Federal Reserve System, *Federal Reserve Bulletin*, August 1972.

^cU.S. Department of the Treasury, *Treasury Bulletin*, February issues.

^dFrom *Survey of Current Business*, October issues, "The International Investment Position of the United States."

²³All references to data from the United States flow of funds accounts are to Board of Governors of the Federal Reserve System, *Flow of Funds Accounts, 1945-1971* (1972) henceforward *FFA* (1972), and subsequent issues of the *Federal Reserve Bulletin*, unless otherwise indicated.

²⁴Goldsmith (1962, 1963).

²⁵*FFA* (1972), p. 58.

TABLE 19
PRIVATE NATIONAL WEALTH, 1929-1969 (CURRENT PRICES)

Year	Corporate Tangible Assets	Non- Corporate Tangible Assets	Household and Institutional Tangible Assets	Net Claims on Governments and Rest of World	Private National Wealth
1929	116.7	106.7	158.1	33.0	414.6
1930	110.3	97.9	150.0	34.0	392.2
1931	97.7	85.1	131.5	35.2	349.5
1932	84.1	73.3	108.1	37.3	302.7
1933	80.4	73.4	104.4	39.4	297.6
1934	83.1	76.3	109.5	45.2	314.2
1935	83.7	79.4	107.9	47.4	318.3
1936	86.6	82.7	112.5	50.0	331.8
1937	95.0	88.1	120.5	51.7	355.2
1938	92.2	85.6	122.2	54.4	354.3
1939	91.9	85.3	123.6	57.8	358.6
1940	96.6	88.7	129.2	59.9	374.4
1941	109.7	98.6	143.7	70.5	422.5
1942	121.1	108.6	155.1	110.3	495.0
1943	126.4	115.1	163.6	155.2	560.2
1944	130.4	121.2	173.9	202.9	628.5
1945	133.1	127.2	181.2	239.2	680.8
1946	159.6	148.5	206.7	244.5	759.3
1947	199.1	175.0	252.6	240.3	867.0
1948	224.2	192.2	291.8	236.3	944.5
1949	226.6	190.4	302.1	242.8	962.0
1950	248.2	212.7	341.8	238.7	1041.4
1951	286.9	234.4	384.9	238.2	1144.5
1952	303.0	237.5	408.7	246.0	1195.1
1953	315.5	238.6	427.8	257.0	1238.9
1954	323.1	244.4	442.9	267.6	1278.0
1955	344.3	253.5	477.6	268.8	1344.2
1956	381.8	269.7	518.8	271.7	1442.0
1957	411.9	287.8	553.8	279.2	1532.7
1958	422.2	303.9	574.0	294.7	1594.7
1959	443.7	315.4	612.8	300.7	1672.5
1960	461.9	330.6	640.7	306.8	1740.1
1961	476.6	347.3	663.8	316.7	1804.4
1962	500.1	367.0	698.6	328.5	1894.1
1963	524.4	384.7	737.9	335.7	1982.8
1964	556.4	404.8	785.1	346.9	2093.3
1965	598.9	433.9	831.1	355.8	2219.7
1966	660.0	464.2	890.6	368.1	2372.9
1967	714.8	494.0	943.0	389.2	2540.9
1968	771.4	529.5	1022.9	404.6	2728.4
1969	839.8	570.8	1109.5	410.5	2930.6

liabilities, less U.S. government financial assets, net liabilities of federally sponsored credit agencies,²⁶ financial assets of included social insurance funds,²⁷ less

²⁶FFA (1972), p. 56.

²⁷The flow of funds of accounts include some social insurance funds in the government sector; the rest are treated as part of the private sector. We include all social insurance funds in the private sector; for this purpose we include the assets of all social insurance funds among claims on the government by the private sector. We include the assets of the OASI, disability, medical trust funds, and the unemployment trust funds; we use the December figure from the *Treasury Bulletin*.